

## **ABSTRACT**

An apparatus and method used in intra-oral dental x-ray imaging equipment  
5 provides automatic detection of the x-ray emission in order to obtain timely transition to  
the image integration and acquisition phase with high level of rejection of false triggering  
induced by blemish defects of the image sensor or by variations of the ambient and  
temperature conditions. A solid state imager, such as a CCD image sensor, is continually  
clocked during the standby phase prior to irradiation from an X-ray source, so providing  
10 on same time an output signal proportional to the accumulated dark current and the  
continuous removal of the same. A control unit analyses the output signal of the imager,  
detects the variation caused by the start of the x-ray emission using appropriate threshold  
levels, and automatically triggers the imager to the image integration and acquisition  
phases. Based on memorised maps of the imager blemish defects, and continually  
15 monitored variations of the imager output signal, the control unit will reject false  
triggering due to imager defects or variations of the ambient and temperature conditions.

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